

Challenging Climate Change in CEE

Workshop on Environment and Climate Change
Tokyo, 15 October, 2009

Zsuzsanna Ivanyi
Senior expert



REGIONAL ENVIRONMENTAL CENTER

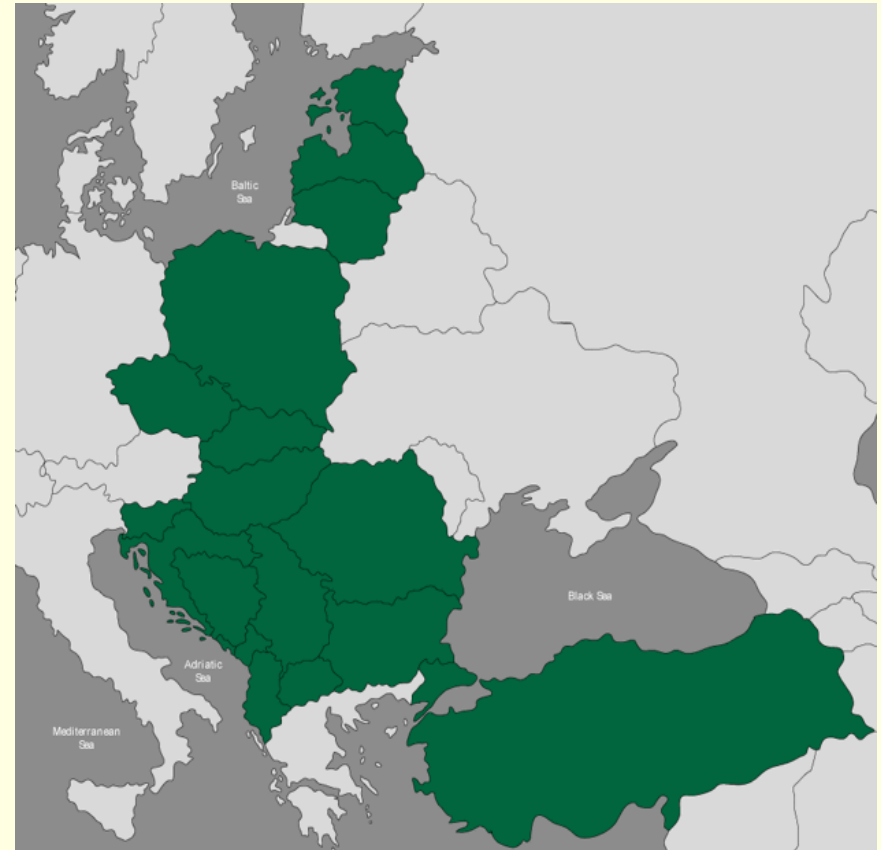
Outline

1. Mission of the REC
2. Environmental Technology needs in the CEE region
3. Overview of the projects under cooperation between Japan and the REC



Regional Environmental Center (REC)

- Non-advocacy, non-for-profit organization
- Independent international established in 1990
- Legally based on a charter signed by the 29 governments and the EC
- Multi-stakeholder International Board
- 190 staff (some 30 nationalities)
- 100% project based organization (over 300 running projects)
- 10 - 12 million Euro annual turnover
- Offices in 17 countries
- Population served ~ 200 million



REC: Mission

“to assist the countries of Central and Eastern Europe to solve their environmental problems and facilitate their transition to democratic civil societies”



© The Regional Environmental Center for Central and Eastern Europe



REC: How?

- By encouraging **cooperation** among different stakeholders (NGOs, governments and businesses)
- By supporting the **free exchange of information**
- By promoting **public participation** in environmental decision-making



The REC bridges - regions

REC beneficiaries:

- EU member states - Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia
- Western Balkans / Different stages of accession to the EU
- Turkey

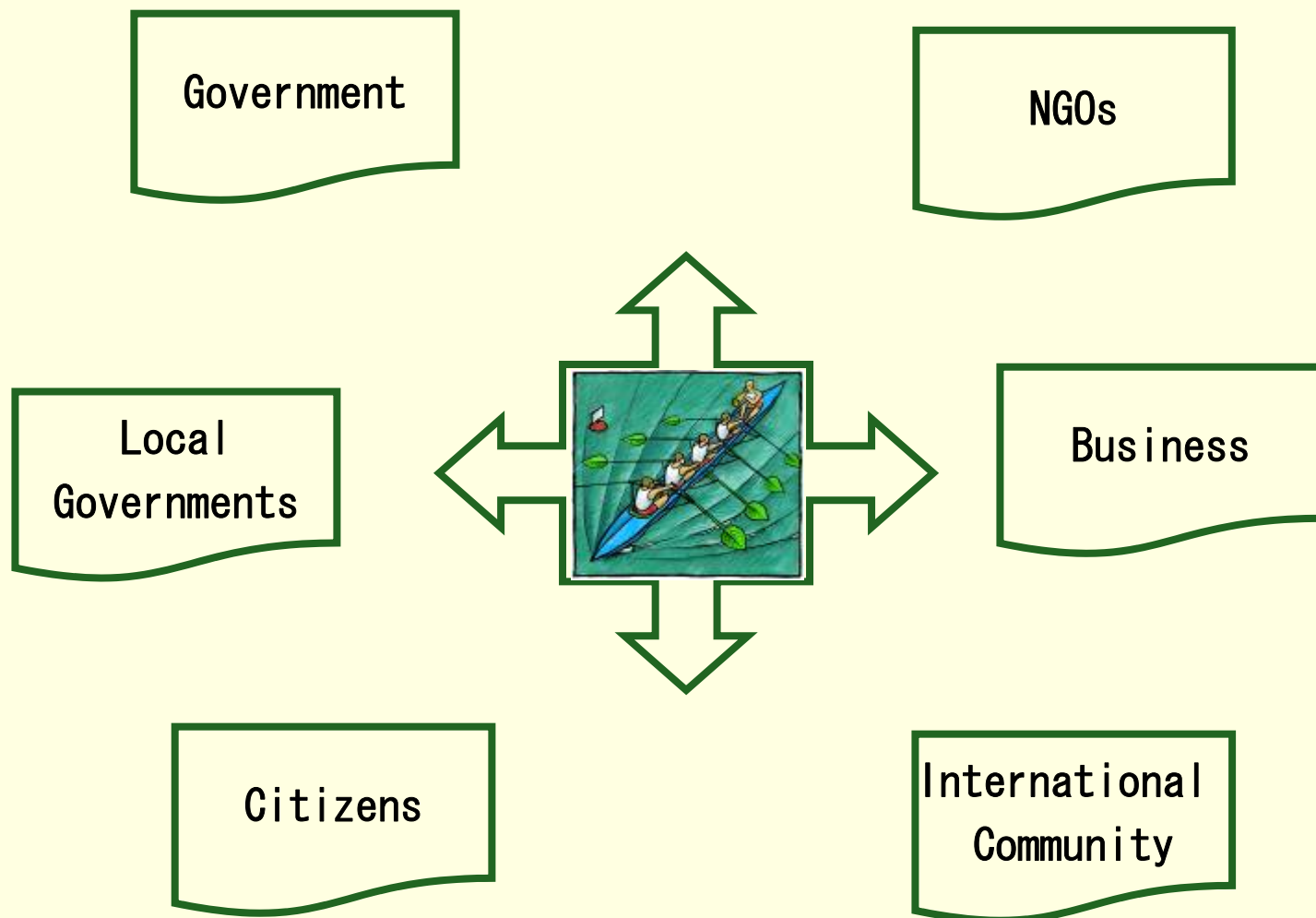
Operation beyond CEE - EECCA, Asia, Africa, Latin-America



REC - Transfer of Lessons Learned



The REC bridges - stakeholders Partnerships: rowing in the same boat



REC - Main directions of work (Strategy 2006–2010)

- Strengthening institutions (SD, LEAP, Env. law, compliance, financing)
- Capacity building of stakeholders and assisting partnerships (Education, training, awareness raising)
- Sustainable management and use of natural resources (biodiversity, water management, resource and waste management)
- Sectoral integration (CC and Sust. Energy, Sust. Transport, Env and Health)

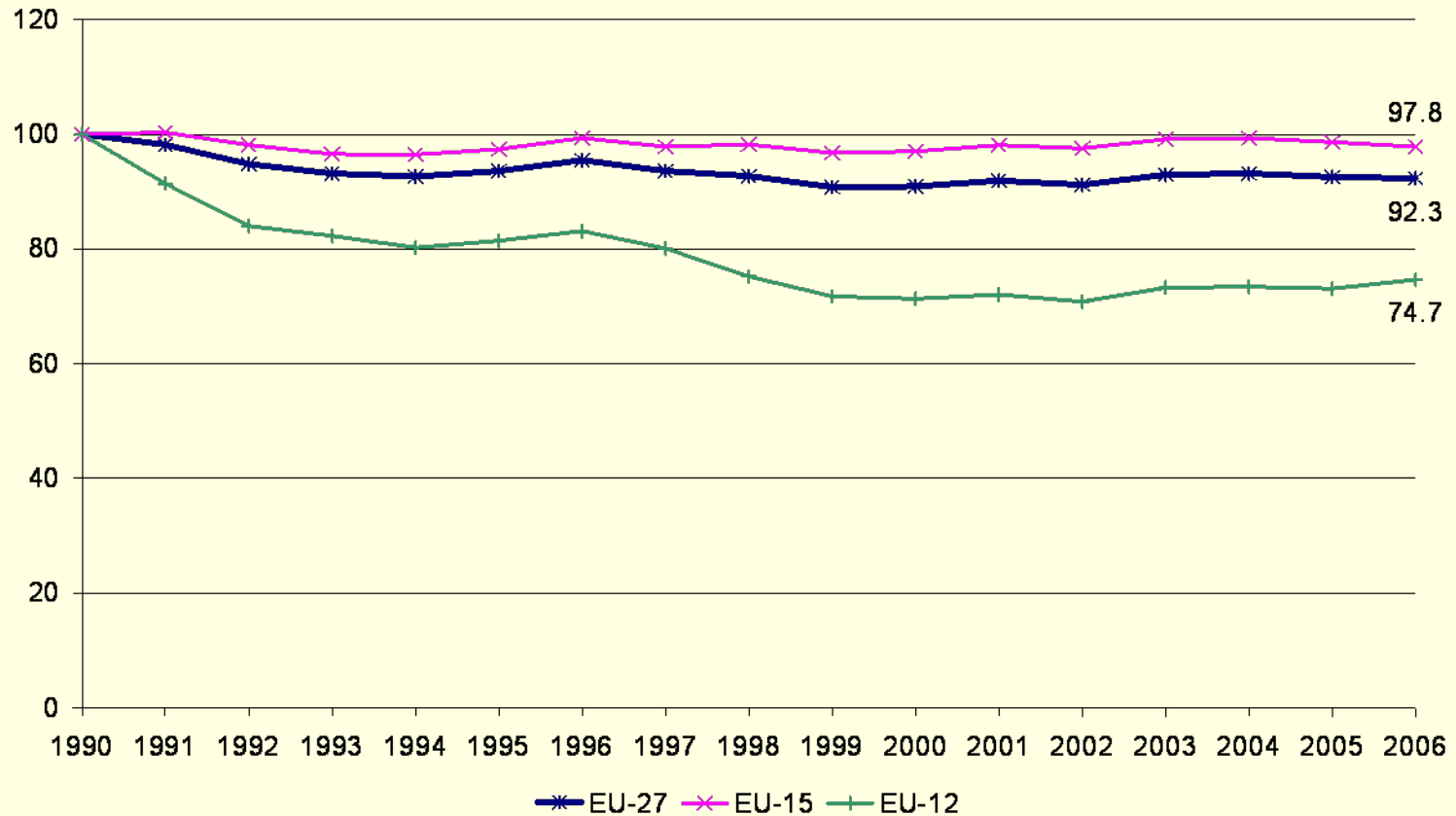


2. Environmental Technology needs in the region

(Related to climate change)



Greenhouse Gas Emission Trends for EU-27, EU-15 and EU-12, 1990-2006



Source: EEA, 2008



Greenhouse gas emissions trends in sectors in CEE

- Large decrease in ' 90 in the energy supply (due to closure of heavy-polluting and energy-intensive industries and energy efficiency improvements in power and heating plants)
- Emissions from transport have been steadily increasing.
- POLAND: experienced the highest increase in GHG emission since 2005 (because increased electricity production in thermal power plants and increased fossil fuel consumption by households in Poland, as well as increased CO2 emissions from the iron and steel industry;)
- CZECH R. : increase in total GHG emission in 2005 and 2006 (mainly chemical Industry)
- ROMANIA: also experienced notable increases in total greenhouse gas emissions, which occurred mainly in the power supply sector

Source: EEA, 2008



REGIONAL ENVIRONMENTAL CENTER

www.rec.org

Situation and potential for GHG reduction

- GHG emission per capita is relatively low, but per GDP is high (inefficient economy, more efforts is needed)
- Dominance of coal will be maintained in electricity generation for the coming decades
- Role of nuclear (tradition) will be important
- Dynamic increase of transport is expected
- Energy efficiency is central to the energy policy (very low at present), although the necessary resources for achieving the declared goals are not available
- Difficult to predict the economic growth, but increase in energy prices anticipated (gas, oil)
- Current reduction is extremely difficult due to the economic and financial crises



Economic crises vs greening the economy

CEE in the deepest recession

- GDP negative growth in the Q2 2009: HU= -7.6%, RO= -8.8%, SR= -5.3%, CR= -4.9%;
- Poland: the only CEE country to avoid recession
- Budget deficits: 2-3 times higher than original targets
- As state budgets deteriorate rapidly; fiscal stimuli are low or non-existent
- Rising unemployment rates, increasing budgetary pressures
- The crisis hit investments in renewable energy worldwide: they dropped by 53% in the first Q 2009 as compared to the same period last year
- Green elements in fiscal stimulus directed in the areas of energy efficiency, renewable energies, cleaner transport



Benefits of 'greening' the economy

Not fully recognised, however benefits are very likely for economy:

- Greener recovery is a faster recovery (job creation)
- Green investments in energy sector and energy efficiency improve energy security
- Environmental regulation will not spoil competitiveness of the economy (predictable regulatory framework)
- Green investments can result in cost savings for households and reduce poverty
- Crisis is an opportunity to re-think the business model (eco-innovation, new ways for growth, new financial tools)



Greening in CEE

- Countries in the region are to undergo again a transition: to establish a low-carbon economy as a part of its sustainability commitments
- ‘Green’ industrialisation and ‘green’ jobs: new opportunity (energy efficiency, renewables, cleaner transport, water efficiency, biodiversity conservation, sustainable agriculture)
- Political will is needed
- Efficient and predictable regulatory framework is needed (incentives for the private sector)




Energy security

In CEE countries the energy security issue is

extremely crucial

- the energy infrastructure is also in a transition period
- climate policy aspects are not considered properly
- diversification of energy sources (extended energy pool is needed for more reliable supplies (investments: more RES, low-carbon fuels)

Problem: low carbon pathway or use of domestic energy sources

 Comprehensive planning exercise for climate energy policies is needed

Green Technology needs

- RES (biomass, wind geothermal)
- Increasing EE in industrial production
- Building sector (both RES and EE) : huge potential
- Special area: District heating
 - Need to increase investment in modernization of heat generation facilities, rehabilitation of distribution networks and installation of control equipment
- Urban transport
- Waste (waste-water and solid waste management)



WASTE

- Waste management assistance in municipal level (how to minimize waste, reuse and recycle local/urban waste)
- Waste water treatment
- Efficiency and frequency of collection of waste
- Improve adequacy of waste disposal
- Prevent groundwater contamination due to inadequate treatment
- Need to organise waste management systems
- Need to increase investments in maintenance and asset renewal
- Improve water supply standards
- Improve collection and treatment of sewage
- Improve operational and financial performance of municipal water and sewerage companies



Good practices

- REC Conference Center with zero-carbon emission
 - Fossil-fuel based emission is reduced to zero by minimizing energy demand and using local energy resources
 - The biggest solar power plant in Hungary



ZERO EMISSION DETAILS

- High efficiency envelope
 - minimise heat loss in winter, prevent heat gains in summer and maximise the exploitation of natural lighting
- Lighting system
 - a „light shelf” will diffuses natural light throughout the interior
- Photovoltaic
 - The PV system will generate close to 30 kilowatt hours
- Heating ventilating and air-conditioning
 - A ground source heat pump will be the primary source of heating and cooling to take advantage of the area's wealth of geothermal resources.
- Architecture
 - Energy systems and architecture have been designed in a modern and integrated approach



“Act before it’s too late!”

- Energy related GHG emissions continue to increase in spite of all the available technologies
- We need to make far more rapid progress in GHG emission reduction
- Renewable energy need to be key parts of the solution
- Energy efficiency measures in the building, transport and industry sectors have very high potential at relatively low cost
- Governments, businesses and civil society including local municipalities all need to play a role
- Technology exists but one part of the solution, education and awareness raising are needed



3. Overview of the projects under cooperation between REC and Japan



REC & Japan

- Japan: one of the largest financial contributors
 - › over EUR 12 million ('90–09)
- Japan Special Fund (1993–)
 - › Financial support to REC projects
 - ✓ *Technical assistance projects, feasibility studies of environmental investment projects, etc. (1993–99)*
 - ✓ *Policy development support (e.g. environmental laws, local environmental action plans) (1998–2001)*
 - ✓ *Support the implementation of UNFCCC and KP (from 2000 onwards)*



Feasibility studies

- Albania: Water and Wastewater Feasibility Study and Institutional Assessment for Fier
- Hungary: Contamination Assessment and Determination of Prevention Measures for Sajó Valley
- Lithuania: Hazardous Waste management in Siaulai
- Macedonia: Integrated Wastewater Treatment and Monitoring System for MHK, Zletovo, Veles
- Poland: MP and FS for Restoration of the Utrata River



Slovakia: Environmental Rehabilitation of the Ziar Valley

Policy Development Support

- Bosnia–Herzegovina Environmental Law&Policy,
- Environmental Audit for Selected Industries, Latvia
- Environmental Management System: roundtable
- Environmental Indicators: workshop
- Waste Management Strategic Policy Framework , Yugoslavia
- Waste Water Treatment Training Centre, Bulgaria, Yugoslavia, Macedonia
- Emergency Programme for Austrakiai Industrial Hazardous Waste Dumpsite, Lithuania
- Improving Energy Saving and Energy Efficiency, Macedonia
- Improving Energy Efficiency Practices , Romania
- Promotion of sustainable transport
- Sofia initiative: SEA workshop
- Training of Young Environmentalists
- Implementation of Aarhus Convention in Lithuania



Supporting climate change related activities (1)

- Capacity building for developing national climate policy
- Strengthening public participation in and access to information of climate policy
- Support for implementing UNFCCC and the Kyoto Protocol
 - ✓ National climate change strategy/action plan
 - ✓ GHG emission inventory
 - ✓ Registry system (for Emission Trading and Joint Implementation)



Supporting climate change related activities (2)

- Promotion of **Joint Implementation**
 - ✓ Database on JI environment in CEE countries
 - ✓ JI potential assessment by country (Romania, Poland, Bulgaria, Czech Republic)
 - ✓ Feasibility Study on landfill gas utilisation project in Timisoara, Romania
 - ✓ Feasibility Study on district heating extension project in Rousse, Bulgaria
- Support of implementation of **GIS** (Romania, Russia, Ukraine, CB workshops)
- Promotion of **CDM** in SEE countries
- Support of shaping climate policy in EITs for **post 2012** period
- Facilitating **adaptation** to climate change: identification of the most vulnerable sectors and the required adaptation policies.



Education for sustainable development: Green Pack

- Since 2001 with the support of Toyota Motor Corporation, the REC developed a comprehensive environmental education programme (an interactive environmental education tool kit part of the curriculum)
 - Primarily intended for school teachers and their students (age 11–15)
 - Focus on particular aspects of environmental protection and SD
 - 22 environmental topics - 5 areas
Environmental Components, Threats to the Environment, Human Activities and Impact, Global Challenges, Values,
 - Available in 11 countries (ongoing preparations in 5 countries)
 - 15.000 teachers
 - 1.800.000 kids



Thank you for your
attention!

zivanyi@rec.org

